

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed 6/7/2011 have been fully considered but they are not persuasive.
2. Applicant argues, see page 6 of the remark, Kato teaches away from claim 1 since Kato specifically teaches that recording stops for a time period upon channel change. The Examiner disagrees.
3. Claim 1 does not exclude the possibility of the recording can not stop during channel change. Paragraphs 83- 85 and figure 5 disclose recording resume when predetermined period, for example 500 milliseconds, elapses after the user channel-switching operation. Since the period of stopping of recording is very short, 500 milliseconds, and the claim language "upon receiving of a second stream of multimedia content..." does not exclude this short period of time. The Examiner still considers the claimed invention reads on the teaching of Kato.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1, 5, 6, 9 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kato (US 2003/0,016,944 A1) and further in view of Mori et al (US 5,854,873).

For claim 1, Kato teaches a method for time-shifting a presentation of multimedia content using a recorder ("time-shifting a presentation of multimedia content" is a statement of intend use because the time-shifting presentation does not distinguish over the prior art, and the prior art, Kato, is capable of performing a time-shifting a presentation of multimedia content by recording the content on a Hard-disk recorder 61 as shown in figure 1 and presents it to user in on monitor 90 in a later time; see MPEP 2105: "During examination, statements in the preamble reciting the purpose or intended use of the claimed invention must be evaluated to determine whether the recited purpose or intended use results in a structural difference (or, in the case of process claims, manipulative difference) between the claimed invention and the prior art...If a prior art structure is capable of performing the intended use as recited in the preamble, then it meets the claim. See, e.g., *In re Schreiber*, 128 F.3d 1473, 1477, 44 USPQ2d 1429, 1431 (Fed. Cir. 1997)") comprising:

receiving a first stream of multimedia content on a first channel (e.g. paragraphs 79-80, figures 1 and 5, video signal received on channel A is recorded on area 11 of the hard disk 63);

storing the first stream of multimedia content to a digit data store associated with the recorder (e.g. paragraphs 79-80, figures 1 and 5, video signal received on channel A is recorded on area 11 of the hard disk 63);

receiving a channel change request during said storing of the first stream (e.g. paragraphs 80-81 and figure 5, a user operation for switching channel A to Channel B at point P6 as shown in figure 5 and encoded signals received on channel A and already stored in the buffer memory 55 can still be recorded on the hard disk 63 after point P6 as shown in figure 5 because the recording area 11 of Channel A goes beyond point P6 when a channel switching request is made);

receiving a second stream of multimedia content on a second channel correlating to the channel change request (e.g. paragraphs 81, 85, and figure 5, video signal receive from channel B is recorded in video area 13 of the hard disk 63);

storing the second stream of multimedia content to the digital data store (e.g. paragraphs 81, 85, and figure 5, video signal receive from channel B is recorded in video area 13 of the hard disk 63) while retaining the first stream of multimedia content in the digital data store (e.g. figure 5 shows video signal receive from channel A is recorded (retained) in area (11) of the hard disk 63 while video signal of channel B is recorded on area 13 of the hard disk 63);

Kato does not further disclose receiving a rewind trick mode request;
presenting the second stream of multimedia content in reverse; and
presenting the first stream of multimedia content in reverse after reaching a beginning of the second stream of multimedia content.

Mori et al teach receiving a rewind trick mode request (e.g. column 61, lines 8-13, "...reverse play is selected by the user...");

presenting the second stream of multimedia content in reverse (e.g. column 62, line 42-47, column 63, lines 34-55, figure 54, VOB #8 of figure corresponds to a stream of multimedia content because VOB #8 is a stream of video and audio data as shown in figure 54, column 63, lines 1-3 disclose each VOB contains plural video packets and in figure 53 and 54, one VOB contains two video packets, and one VOB (video object) contains plural VOBUs (Video Object Unit), VOB #8 is reverse playback from the last VOB); and

presenting the first stream of multimedia content in reverse after reaching a beginning of the second stream of multimedia content (e.g. column 63, lines 44-60 and figure 54, after reading from the first DSI packet of the (first) VOB of VOB #8 of figure 54, if path C is taken, the last DSI of the (last) VOB of VOB #6 is read. Thus, VOB# 8 corresponds to the claimed second stream and VOB #6 corresponds to the claimed first stream). It would have been obvious to one ordinary skill in the art at the time the invention was made to incorporate the teaching of Mori et al into the teaching of Kato to allow user to search the video data backward instantly without jumping back to the previous stream and using the fast forward command to search for his/her favorite scenes to improve the playback efficiency and giving user more convenience. The combination of Kato and Mori et al would work because the video data of Kato is recorded in MPEG format as disclose in paragraphs 79-80 of Kato and the entire invention of Mori et al is based on the MPEG2 standard as disclose in column 68, lines 3-5 and column 27, lines 8-13.

For claim 6, Kato teaches

an input port (e.g. figure 2, antenna BAT)for receiving a first stream of multimedia content on a first channel (e.g. paragraphs 79-80, figures 1 and 5, video signal received on channel A is recorded on area 11 of the hard disk 63);

a digital data store (e.g. figure 2, hard disk 63) for storing the first stream of multimedia content (e.g. paragraphs 79-80, figures 1 and 5, video signal received on channel A is recorded on area 11 of the hard disk 63);;

a user interface (e.g. figure 1 or figure 2, remote controller IF 79, paragraph 61) for receiving a channel change request during the storing of the first stream (e.g. paragraphs 80-81 and figure 5, a user operation for switching channel A to Channel B at point P6 as shown in figure 5 and encoded signals received on channel A and already stored in the buffer memory 55 can still be recorded on the hard disk 63 after point P6 as shown in figure 5 because the recording area 11 of Channel A goes beyond point P6 when a channel switching request is made);

a processor (e.g. paragraph 61, figure 2, microcomputer 76) for changing a channel to receive through the input port a second stream of multimedia content on a second channel correlating to the channel change request (e.g. paragraphs 81, 85, and figure 5, video signal receive from channel B is recorded in video area 13 of the hard disk 63) and storing the second stream of multimedia content to the digital data store while retaining the first stream of multimedia content in the digital data store (e.g. figure 5 shows video signal receive from channel A is recorded (retained) in area (11) of the

hard disk 63 while video signal of channel B is recorded on area 13 of the hard disk 63);
and

a video decoder that presents the multimedia content (e.g. MPEG 2 decoder 72);

Kato does not further disclose presents the second stream of multimedia content in reverse, then present the first stream of multimedia content in reverser after reaching a beginning of the second stream of multimedia content.

Mori et al teach presents the second stream of multimedia content in reverse (e.g. column 62, line 42-47, column 63, lines 34-55, figure 54, VOB #8 of figure corresponds to a stream of multimedia content because VOB #8 is a stream of video and audio data as shown in figure 54, column 63, lines 1-3 disclose each VOB contains plural video packets and in figure 53 and 54, one VOB contains two video packets, and one VOB (video object) contains plural VOBUs (Video Object Unit), VOB #8 is reverse playback from the last VOB), then present the first stream of multimedia content in reverser after reaching a beginning of the second stream of multimedia content. (e.g. column 63, lines 44-60 and figure 54, after reading from the first DSI packet of the (first) VOB of VOB #8 of figure 54, if path C is taken, the last DSI of the (last) VOB of VOB #6 is read. Thus, VOB# 8 corresponds to the claimed second stream and VOB #6 corresponds to the claimed first stream). It would have been obvious to one ordinary skill in the art at the time the invention was made to incorporate the teaching of Mori et al into the teaching of Kato to allow user to search the video data backward instantly without jumping back to the previous stream and using the fast forward command to search for his/her favorite scenes to improve the playback

efficiency and giving user more convenience. The combination of Kato and Mori et al would work because the video data of Kato is recorded in MPEG format as disclose in paragraphs 79-80 of Kato and the entire invention of Mori et al is based on the MPEG2 standard as disclose in column 68, lines 3-5 and column 27, lines 8-13.

For claims 5 and 11, Kato disclose receiving a play request (e.g. paragraphs 10, 12, 41, 47, 48, user can user the remote control to play back channel recorded in the cache for cache reproduction); and using a MPEG2 decoder 72, to decode the video and present the video data on the monitor 90. kato does not further disclose present the first stream of multimedia content, then presents the second stream of multimedia content after reaching an end of the first stream of multimedia content.

Mori et al teach present the first stream of multimedia content, then presents the second stream of multimedia content after reaching an end of the first stream of multimedia content (e.g. figure 55, the last DSI of VOB #5 is read, if path A is chosen, VOB #6 is read. This conclusion is based on the disclosure of claims 1 and 6 above, the arrow of figure 55 shows the reproduction direction of from VOB #5 to VOB#6, also see column 66 lines 1-16, also see figure 53). It would have been obvious to one ordinary skill in the art at the time the invention was made to incorporate the teaching of Mori et al into the teaching of Kato to allow user to search the video data instantly using the fast forward command to search for his/her favorite scenes to improve the playback efficiency and giving user more convenience. The combination of Kato and Mori et al would work because the video data of Kato is recorded in MPEG format as disclose in

paragraphs 79-80 of Kato and the entire invention of Mori et al is based on the MPEG2 standard as disclose in column 68, lines 3-5 and column 27, lines 8-13.

For claim 9, Kato teaches a user input device through which a user can choose a user selectable function to perform a desired recorder operation (e.g. paragraph 41user can user the remote control the recording of a channel of interest);

6. Claims 2, 3, 7 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kato (US 2003/0,016,944 A1) and Mori et al (US 5,854,873), as applied to claims 1, 5, 6, 9 and 11 above, and further in view of Shintani (US 5,751,371).

See the discussed of Kato and Mori et al above.

For claims 2 and 7, Kato and Mori et al do not further disclose the processor further assigns at least one identifier to each of the first and second streams of multimedia content to identify a sequence in which the first and second streams of multimedia content are recorded. Shintani teaches processor further assigns at least one identifier to each of the first and second streams of multimedia content to identify a sequence in which the first and second streams of multimedia content are recorded (e.g. column 10, lines 22-34, lines 56-65 and figure 7, CPU 120 records information such as program number, channel number; a video-recording data, figure 7 shows that the program numbers are a sequence of number 1, 2, 3, 4, 5, 6, 7, 8 corresponds to the recording data, which is listed in chronological order. The Examiner considers sequence of number 1, 2, 3, 4, 5, 6, 7, 8 identify a sequence in which the first and second streams

of multimedia content are recorded). It would have been obvious to one ordinary skill in the art at the time the invention was made to incorporate the teaching of Shintani into the teaching of Kato and Mori et al for organizing the recorded programs and presenting the organized programs to user to allow user to identify his/her favorite program quickly.

For claims 3 and 8, Kato and Mori et al do not further disclose processor assigns at least one identifier to each of the first and second streams of multimedia content to identify a channel from which the first and second streams of multimedia content are recorded. Shintani teaches processor assigns at least one identifier to each of the first and second streams of multimedia content to identify a channel from which the first and second streams of multimedia content are recorded (e.g. column 10, lines 22-34, lines 56-65 and figure 7, CPU 120 records information such as program number, channel number; a video-recording data, figure 7 shows the channel number for each recorded program). It would have been obvious to one ordinary skill in the art at the time the invention was made to incorporate the teaching of Shintani into the teaching of Kato and Mori et al for organizing the recorded programs and presenting the organized programs to user to allow user to identify his/her favorite program quickly.

7. Claims 12 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kato (US 2003/0,016,944 A1) and Mori et al (US 5,854,873), as applied to claims 1, 5, 6, 9 and 11 above, and further in view of West et al (US 6,971,121).

For claims 12 and 15, Kato and Mori et al do not disclose the first and second streams of multimedia content are stored without providing a delineator between two streams. West et al teach the first and second streams of multimedia content are stored without providing a delineator between tow streams (e.g. column 18, lines 20-43, figure 4B, FAT has the location information of MCI1 and MCI2 in the hard disk, and figure 4B shows that there's no delineator in between MCI1 and MCI2). It would have been obvious to one ordinary skill in the art at the time the invention was made to incorporate the teaching of West into the teaching of Kato and Mori et al to more efficiently manage multiple buffers (e.g. West et al, column 2, lines 1-8).

8. Claims 13 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kato (US 2003/0,016,944 A1) and Mori et al (US 5,854,873), as applied to claims 1, 5, 6, 9 and 11 above, and further in view of Rodriguez et al (US 7,409,140).

For claims 13 and 16, Kato and Mori et al do not disclose recording of the first stream of multimedia content continues while recording the second stream of multimedia content. Rodriguez et al teach recording of the first stream of multimedia content continues while the recording the second stream of multimedia content (e.g. column 34, lines 4-23). It would have been obvious to one ordinary skill in the art at the time the invention was made to incorporate the teaching of Rodriguez et al into the teaching of Kato and Mori et al to make more efficient use of resources (e.g. Rodriguez et al, column 2, lines 1-8).

9. Claims 14 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kato (US 2003/0,016,944 A1) and Mori et al (US 5,854,873), as applied to claims 1, 5, 6, 9 and 11 above, and further in view of Adams (US 6,842,802).

For claims 14 and 17, Kato and Mori et al do not disclose providing an alert when the stored multimedia content approaches capacity of the digital data store. Adams teaches providing an alert when the stored multimedia content approaches capacity of the digital data store (e.g. column 8, lines 5-22). It would have been obvious to one ordinary skill in the art at the time the invention was made to incorporate the teaching of Adams into the teaching of Kato and Mori et al to solve the dilemma wherein buffer under runs and overruns may incur errors (e.g. Adams, column 8, lines 5-22) to improve the robustness of the system.

Applicant's amendment necessitated the new ground(s) of rejection presented in this office action. Accordingly, THIS ACTION IS MADE FINAL. See MPEG § 706.07 (a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136 (a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period. Then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daquan Zhao whose telephone number is (571) 270-1119. The examiner can normally be reached on M-Fri. 7:30 -5, alt Fri. off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tran Thai Q, can be reached on (571)272-7382. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

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